Ranked Choice Voting in Practice:
Content Analysis of Campaign Tone in Newspapers and Twitter Feeds in 2013 RCV Elections

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American politics is known for rancorous and negative election campaigns. Scholars are now studying whether changing from winner-take-all to ranked choice voting (RCV) elections will encourage more positive campaign dialogue and more civil politics. In theory, RCV offers incentives for candidates to

> *TRICK or TREAT: @MayorTaylor has given thousands to @BarackObama. Spooky how liberal she is!*
>
> -- Tweet by @DeweyBartlett, then-candidate for Tulsa Mayor, Oct 31, 2013

> *[W]e have a mayor at war with truth and common sense, and who has made absolutely no effort to bridge any gaps.*
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> -- Letter to the editor, *Seattle Times,* July 29, 2013

campaign positively since each vote is not an "all or nothing" battle—candidates can appeal to strong supporters of other candidates for their second or third choices. In fact, candidates often need a combination of first choice rankings as well as some lower rankings in order to win elections.

Professor Martha Kropf, at the University of North Carolina at Charlotte, has undertaken a rigorous analysis of campaign tone in the 2013 local elections in RCV and non-RCV cities. Kropf's work is part of a multi-faceted academic study that also involves public opinion surveys, interviews and turnout analysis. Examining newspaper coverage and candidate "tweeting", Kropf uses a sophisticated "content analysis" technique to show that newspaper coverage in the local contests in RCV cities was significantly more positive (and less negative) than in the non-RCV cities. Kropf also shows that mayoral candidates in Minneapolis addressed other candidates on Twitter more often and more civilly than did mayoral candidates in non-RCV cities.

Assessing the Positivity of Newspaper Coverage

Kropf uses the *Linguistic Inquiry and Word Count* (LIWC) software to assess sentiment in all coverage of the local election (more than 1,000 articles in total) in the major local newspaper of each of ten cities with local elections in Fall, 2013. Three of the cities, **Minneapolis, MN, St. Paul, MN**, **and Cambridge, MA**, held elections using RCV. The other seven were control cities, with plurality voting, chosen because they were culturally, economically and demographically like one of the RCV cities.[1]

LIWC, which has been used extensively by academics over two decades, analyzes thousands or millions of pages of text for language use patterns indicating different emotions or processes.

> **LIWC** has been used to explore 1000s of different texts. For example, *Slatcher, Chung, Pennebaker and Stone*'s 2007 study used LIWC and campaign speeches to explore the personalities of the 2004 presidential candidates. Interestingly, amongst other findings, content analysis revealed that the Democratic candidate, John Kerry, used language more similar to that of a depressed person than did the Republican candidate, George W. Bush.

LIWC utilizes the idea that "seemingly insignificant words that people use are particularly telling about their emotions, motives, and life circumstances" (Pennybaker and Lay, 2002: 273). Kropf uses LIWC to assess newspaper articles for positivity, negativity, social language, inclusive and exclusive language, the use of the future tense, words indicating anger, anxiety, tentativeness, and certainty. For our purposes, positive and negative language use are the most relevant. Terms like "freed", "bless" and "agreeabl*" are indicative of positive sentiment. Words like "maddening", "alone" and "battl*" are indicative of negative sentiment. Part of an article with a high proportion of positive words, from Minneapolis, is extracted below.

> *... I don't remember ever having as many conversations with friends, neighbors and colleagues so unsure of who'd be getting their vote for Minneapolis mayor, City Council and park board seats. ... Friends and neighbors can be influential, too, although you should count yourself lucky if you have friends or neighbors who could guide you through this quirky election. The friends I always turn to let me down this year. Splendidly informed, passionate about our city and politically active, they divided equally between candidates, leaving me hanging. I consider this very good news for democracy.*
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> -- Staff Writer Gail Rosenblum, *Star Tribune*, November 7, 2013

[1] The control cities were Boston, Lowell and Worcester in Massachusetts, Cedar Rapids and Des Moines in Iowa, Tulsa, Oklahoma, and Seattle, Washington.

In the more than 1,000 newspaper articles studied, about 85% of RCV city newspaper articles were more positive than negative. In contrast, about 77% of articles in control cities were more positive than negative. Overall, newspaper coverage of local elections in RCV cities contained 2.53 times as many positive words as negative words, compared to 1.76 in non-RCV cities (Table 1).

Newspaper coverage of 2013 local elections in Cambridge, Massachusetts, which has used RCV continuously since 1940, had the highest percentage of positive words (3.11%). The coverage in two non-RCV cities (Seattle and Des Moines) contained the lowest (2.02%). The highest proportion of negative words in the 10 cities studies was in Lowell, a non-RCV city, with 2.57% negative words.

Table 1: Positivity and Negativity in Newspaper Coverage

City	Positive Words (%)	Negative Words (%)	Ratio
Cambridge, MA	**3.11**	**1.04**	**2.99**
Des Moines, IA	2.02	0.68	2.97
St. Paul, MN	**2.28**	**0.84**	**2.71**
Cedar Rapids, IA	2.92	1.15	2.54
Worcester, MA	2.53	1.04	2.43
Boston, MA	2.59	1.21	2.14
Minneapolis, MN	**2.38**	**1.14**	**2.09**
Tulsa, OK	2.52	1.29	1.95
Seattle, WA	2.02	1.46	1.38
Lowell, MA	2.31	2.57	0.90
All RCV-Cities	**2.71**	**1.07**	**2.53**
All non-RCV control cities	**2.41**	**1.37**	**1.76**

Assessing Candidate's Twitter Activity

Tweeting 140 characters (or fewer) is an emerging form of political speech. In larger cities, most viable candidates for local office in 2013 had a Twitter account. Kropf assesses over 16,000 tweets (including retweets) from more than 50 candidates in 10 cities that had local elections in 2013.[2] Using LIWC, Kropf finds that tweets were relatively more positive in non-RCV cities than in RCV cities. Kropf explains these findings by reference to the multi-purpose nature of Twitter. Candidates, Kropf notes, tweet not only to send campaign messages, but also to announce events, thank supporters or thank those who hold candidate forums. Some tweets are a hasty reaction to a recent attack or praise. Candidates also use tweets for personal reasons that seemingly have nothing to do with the campaign—such as retweeting an interesting article. All these tweets are included in the analysis so as to avoid any selection bias.

Experts say that Twitter is its own language. So, to add more depth to her analysis, Kropf analyzes the tweets in the four mayoral races to see not just positivity or negativity, but also whether the candidates communicated civilly to each other. This closer, and significantly less efficient, analysis suggested two salient differences in how candidates addressed each other (or not) in the tweets in RCV-cities. First, candidates in non-RCV cities rarely mentioned each other (i.e., there were few tweets naming another candidate or containing "@candidateX" in candidate Y's Twitter feed). Instead, in non-RCV cities Twitter was used by candidates more to announce (positive) news of upcoming events. When candidates in non-RCV cities did reference each other, it was usually to attack or discredit. Indicative tweets from the candidates in non-RVC cities are presented in Figure 1. By contrast, mayoral candidates in the RCV city, Minneapolis, referenced each other more often and more often in positive terms. Betsy Hodges, the front-running mayoral candidate, retweeted MackenzieNEmpls who "*Lik[ed] Winton's comments on pedestrian improvements.*" Cam Winton, the main conservative candidate, retweeted a citizen's tweet "*RT @r_delong612: Excited to vote for @betsyhodges, @don_samuels, @cam_winton for #mplsmayor !*" Indeed, retweeting citizens' tweets directed at the three candidates whom they were going to rank was common among Minneapolis mayoral candidates. There was no equivalent in non-RCV cities, suggesting a more cordial atmosphere developed on Twitter among candidates in Minneapolis than in the non-RCV cities.

Figure 1: Indicative Candidate-to-Candidate Tweets in Non-RCV Cities

Fact check: John Connolly's campaign is spending thousands on push polls to attack Marty Walsh.
--Marty Walsh, then-candidate for Boston Mayor, about his rival John Connolly

@KIRO7Seattle reports on the McGinn's campaign's outrageous cyberbullying of a Planned Parenthood staffer.
--Seattle mayoral candidate Ed Murray about incumbent mayor Michael McGinn in Seattle

Police slam Bartlett, says talk of layoffs hurts public safety #TulsaCrime #Tulsa http://t.co/oboRjakoev
--Tulsa mayoral candidate Kathy Taylor about her rival Dewey Bartlett

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For more information on RCV, visit www.fairvote.org.

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[2] These were the same three RCV cities, and 5 of the same control cities. Spokane, WA and Madison, WI were used as control cities in the place of Des Moines and Cedar Rapids, IA, because no candidates were on Twitter in the Iowan cities.